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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/688,074

10/17/2003

Leonardo Sala

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7590

05/04/2006

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EXAMINER

HOLTON, STEVEN E

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,074	Applicant(s) SALA ET AL.	
	Examiner Steven E. Holton	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The disclosure uses the verb “effect” rather than “affect”, such as on page 2, lines 28-31. The Examiner is unsure which verb would be correct, but feels that the verb “affect” is more likely the proper verb for the description of the invention. Example, the ordering of the rows is affected by the algorithm, not the order is effected by the algorithm. However, the Examiner is not sure if the verb should or should not be changed and would like a clarification (and perhaps a change to the specification) from the applicant.

Page 2, line 14, the phrase “which has reduced consumes” is not grammatical ;

Page 6, line 18, the phrase “the waveform of column” needs terms to provide description for “of column”

Page 8, line 2 the word “anyone” should be “any one”

Page 10, line 26 – page 11, line 6, the paragraph describing the method is poorly written and difficult to understand. It possesses unexpected terms such as page 10, line 31, “excellent one” and page 11, line 1, “is adjourned to the next row”, and the sentence structure makes it difficult to understand the steps of the method. The paragraph would benefit from some editing and rewriting of the method into a clearer form.

Appropriate correction is required.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claim 1, the claim states a method where "ordering every column of said plurality of columns so that the total switching number between said first electric state and said second electric state is minimized." As understood by the Examiner, the described invention in the specification is used to create an order for the scanning rows

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of the display so that the amount of changes in the columns from one row to another is minimized. The columns are not ordered or reordered by the method as defined by the claim, the rows are re-ordered to minimize switching from one row to the next row. This is shown in Figs 1 and 2. Fig. 1 shows that the rows are scanned in order 0,1,2, then 3, but in the current invention shown in Fig. 2, the rows are re-ordered and turned on 0, 2, 1, then 3. The columns are not reordered, by the described invention. Also, the term "total switching number" is not used within the specification except for the abstract, a different or more well defined term should be used so that one skilled in the art will be better able to understand the meaning and scope of the invention.

Regarding claims 3 and 4, the Examiner notes that as stated, the order of the steps in claims 1 and 3, or claims 1 and 4 is not specified. However, the proper function of the invention as described in the specification distinctly defines the order of when certain steps would be applied. That is, regarding claim 3, the rows would be first grouped in a manner of greatest number of first electric state, and then ordered to minimize the change from one row to another. Applying the steps in the other sequence, that is, minimizing the change, and then re-ordering to group the rows with the greatest number in the first electric state, would remove any benefit obtained from minimizing the switching between the rows because the second re-ordering would remove any of the minimizing changes. The same would occur if the steps of claims 1 and 4 were applied in the wrong order.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Tajima et al. (UsPgPub: 2001/0040536), hereinafter Tajima.

Regarding claim 1, Tajima describes a method of re-ordering the scanning rows of an LCD display. The rows are ordered so that the changes from one row to the next row are minimized (Tajima, paragraph 131, with emphasis to lines 7 – 10). Tajima describes providing “a prefixed scanning ordering (paragraph 131, line 7, called a ‘scan sequence’)” and ordering the rows so that the “total switching number between said first electric state and said second electric state is minimized” (paragraph 131, lines 8 and 9). Tajima describes the method as the order in ascending difference, that is the smallest change, then the next smallest change and so on, which would be a minimized amount of state change from row to row starting with the first row.

Regarding claim 2, Tajima states, “EXORs are calculated among the display data for the lines, and any line involving a smaller number is scanned earlier.” The understood algorithm described in claim 2, is based on the described method within the specification associated with Fig. 3. This method involves comparing all rows with each other and if the differences from the current row to the next row (compare i and $i+1$) is greater than the differences from the current row to a distant row (compare i and j), the

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order of scanning is changed to display the distant row before the next row. That is, if the difference between row "i" and row "j" is less than the difference between row "i" and row "i+1" the scanning sequence is changed between rows "j" and "i+1". Although Tajima does not discuss the internal method of the algorithm, it is inherent within a method of ordering that all rows must be compared so that the rows are ordered to minimize the change from one row to another. Logically it is impossible to order a group of items with out comparing all of the items between each other to determine the position of each item within the order.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven E. Holton
Division 2629; April 30, 2006

AMR A. AWAD
PRIMARY EXAMINER

